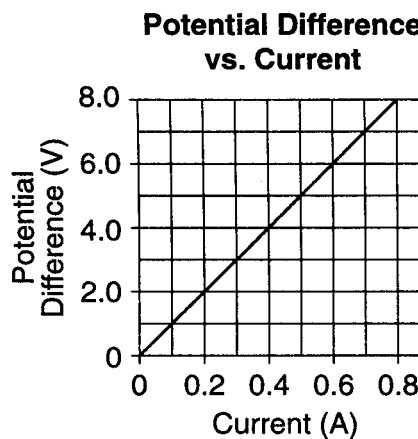


Ohm's law

$V = IR$

1. Which voltage would cause a current of 0.5 ampere in a circuit that has a resistance of 24 ohms?
 - 1) 6.0 V
 - 2) 12 V
 - 3) 24 V
 - 4) 48 V
2. A lamp has a current of 2.0 amperes at 6.0 volts. The resistance of the lamp must be
 - 1) 1.5 Ω
 - 2) 6.0 Ω
 - 3) 3.0 Ω
 - 4) 12 Ω
3. What is the current through a 25 ohm resistor connected to a 5.0 volt power supply?
 - 1) 0.20 A
 - 2) 5.0 A
 - 3) 25 A
 - 4) 30. A
4. A 330.-ohm resistor is connected to a 5.00-volt battery. The current through the resistor is
 - 1) 0.152 mA
 - 2) 15.2 mA
 - 3) 335 mA
 - 4) 1650 mA

5. In a flashlight, a battery provides a total of 3.0 volts to a bulb. If the flashlight bulb has an operating resistance of 5.0 ohms, the current through the bulb is
 - 1) 0.30 A
 - 2) 0.60 A
 - 3) 1.5 A
 - 4) 1.7 A
6. In a simple electric circuit, a 110-volt electric heater draws 2.0 amperes of current. The resistance of the heater is
 - 1) 0.018 Ω
 - 2) 28 Ω
 - 3) 55 Ω
 - 4) 220 Ω
7. The graph below represents the relationship between the potential difference across a metal conductor and the current through the conductor at a constant temperature.



What is the resistance of the conductor?

- 1) 1
- 2) 0.01
- 3) 0.1
- 4) 10

Ohm's law
Answer Key

1. 2

2. 3

3. 1

4. 2

5. 2

6. 3

7. 4
